1 ABSTRACT OF THE DISCLOSURE

A semiconductor device includes a substrate, a gate oxide film formed on the substrate, a gate electrode provided on the gate oxide film, first and second diffusion regions formed in the substrate at both lateral sides of the gate electrode. The gate electrode includes a first region located immediately underneath the gate electrode and a second region adjacent to the first region, wherein the first and second regions contain N atoms with respective concentrations such that the second region contains N with a higher concentration as compared with the first region.